L Number	Hits	Search Text	DB	Time stamp
l	5	castellations and corrugations and interconnection	USPAT;	2004/08/20 14:29
			US-PGPUB;	
			EPO;	
İ			DERWENT;	
			IBM_TDB	
2	0	20030234447.URPN.	USPAT	2004/08/20 14:25
3	4	("5801446"   "6213347"   "6228680"   "6245583").PN.	USPAT	2004/08/20 14:27
4	0	6696757.URPN.	USPAT	2004/08/20 14:28
5	2	6365958.pn.	USPAT;	2004/08/20 16:15
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
6	4	6365958.URPN.	USPAT	2004/08/20 14:29
7	11	pad and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 16:18
		grooved) and nascent	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
8	11	(pad and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 16:17
		grooved) and nascent) not 6365958.URPN.	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
9	8	(pad and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 16:52
		grooved) and nascent) not 6365958.URPN. not	US-PGPUB;	
1		6365958.pn. not (("5801446"   "6213347"   "6228680"	EPO;	
		"6245583").PN.) not (castellations and corrugations and	DERWENT;	•
		interconnection)	IBM_TDB	
10	1410	pad and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 17:01
į		grooved)	US-PGPUB;	
			EPO;	
			DERWENT;	
,,	007		IBM_TDB	0004/00/00 1 4 70
11	297	(pad and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 16:53
		grooved) ) and (crack or cracks)	US-PGPUB;	
			EPO;	
			DERWENT;	
12	0	20020224447 LIDDNI	IBM_TDB	2004/00/20 17 27
13	0	20030234447.URPN. 20030230809.URPN.	USPAT USPAT	2004/08/20 16:27
13	0	20030230809.URPN. 20020125569.URPN.	USPAT	2004/08/20 16:28 2004/08/20 16:34
15	0	6696757.URPN.	USPAT	2004/08/20 16:34
16	4	("5801446"   "6213347"   "6228680"   "6245583").PN.	USPAT	2004/08/20 16:38
17	0	6472763.URPN.	USPAT	2004/08/20 16:38
18	2	("5946590"   "6030512").PN.	USPAT	2004/08/20 16:42
19	13	5288007.URPN.	USPAT	2004/08/20 16:42
20	870	interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 10:47
- 5	3,3	(groove or grooved)	US-PGPUB;	200 400/20 20.49
į		(0 1 0- 0-00-00)	EPO;	
İ		,	DERWENT;	
			IBM TDB	
21	115	(interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 16:57
İ	_ <del></del>	(groove or grooved) ) and (crack or cracks)	US-PGPUB;	200 4 00, 20 10.57
		O TO TO TO TO TO TO TO TO TO TO TO TO TO	EPO;	
			DERWENT;	
			IBM TDB	İ

22	38	((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not 5288007.URPN. not (("5946590"   "6030512").PN.) not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not ((pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) and nascent) not 6365958.URPN. not 6365958.pn. not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not (castellations and corrugations and interconnection)	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:54
23	582	(pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and stress	USPAT; US-PGPUB; EPO; DERWENT;	2004/08/20 16:56
24	103	((pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and stress) and (delaminat\$4 or fracture)	IBM_TDB USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:56
25	39	(((pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and stress) and (delaminat\$4 or fracture)) not ((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not 5288007.URPN. not (("5946590"   "6030512").PN.) not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not ((pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) and nascent) not 6365958.URPN. not 6365958.pn. not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not (castellations and corrugations and interconnection)	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:56
26	327	(interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and stress	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:59
27	65	((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and stress) and (delaminat\$4 or fracture)	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:59
28	13	((((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved)) and stress) and (delaminat\$4 or fracture)) not (((pad and (copper or Cu) and (tin or Sn) and (groove or grooved)) and stress) and (delaminat\$4 or fracture)) not ((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved)) and (crack or cracks)) not 5288007.URPN. not (("5946590"   "6030512").PN.) not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not ((pad and (copper or Cu) and (tin or Sn) and (groove or grooved)) and (crack or cracks)) not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) and nascent) not 6365958.URPN. not 6365958.pn. not (("5801446"   "6213347"   "6228680"   "6245583").PN.) not (castellations and corrugations and interconnection)	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 16:57

29	354	interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 16:57
29	334	(texture or textured)	USPAT; US-PGPUB;	2004/08/20 16:37
			EPO;	
			DERWENT;	
			IBM_TDB	
30	73	(interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 17:14
	1	(texture or textured) ) and (crack or cracks)	US-PGPUB;	
			EPO; DERWENT;	
			IBM_TDB	
31	43	((interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 16:59
		(texture or textured) ) and (crack or cracks)) not	US-PGPUB;	
		(((interconnection and (copper or Cu) and (tin or Sn)	EPO;	
		and (groove or grooved) ) and stress) and (delaminat\$4	DERWENT;	
		or fracture)) not (((pad and (copper or Cu) and (tin or	IBM_TDB	
		Sn) and (groove or grooved) ) and stress) and (delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved)		
		and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not 6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
32	193	(interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 17:13
		(texture or textured) ) and stress	US-PGPUB;	
			EPO;	
			DERWENT;	
33	69	((interconnection and (copper or Cu) and (tin or Sn) and	IBM_TDB USPAT;	2004/08/20 17:13
33		(texture or textured) ) and stress) and (delaminat\$4 or	US-PGPUB;	2004/06/20 17:13
		fracture)	EPO;	
		•	DERWENT;	
			IBM_TDB	
34	10	(((interconnection and (copper or Cu) and (tin or Sn)	USPAT;	2004/08/20 17:01
	1	and (texture or textured) ) and stress) and (delaminat\$4	US-PGPUB;	
		or fracture)) not ((interconnection and (copper or Cu) and (tin or Sn) and (texture or textured) ) and (crack or	EPO; DERWENT;	
		cracks)) not (((interconnection and (copper or Cu) and	IBM_TDB	
		(tin or Sn) and (groove or grooved) ) and stress) and	15155	
		(delaminat\$4 or fracture)) not (((pad and (copper or Cu)		
		and (tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not 5288007.URPN. not (("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
	.	(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not		
		6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		

35	569	pad and (copper or Cu) and (tin or Sn) and (textured or	USPAT;	2004/08/20 17:01
		texture)	US-PGPUB;	
			EPO;	
			DERWENT;	
36	130	(pad and (copper or Cu) and (tin or Sn) and (textured or	IBM_TDB USPAT;	2004/08/20 17:27
30	150	texture)) and (crack or cracks)	US-PGPUB;	200-700/20 17.27
		(4.44.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4	EPO;	
			DERWENT;	
			IBM_TDB	
37	51	((pad and (copper or Cu) and (tin or Sn) and (textured	USPAT;	2004/08/20 17:13
		or texture) ) and (crack or cracks)) not (((interconnection and (copper or Cu) and (tin or Sn) and (texture or	US-PGPUB; EPO;	
		textured) ) and stress) and (delaminat\$4 or fracture)) not	DERWENT;	
		((interconnection and (copper or Cu) and (tin or Sn) and	IBM TDB	
		(texture or textured) ) and (crack or cracks)) not	_	
		(((interconnection and (copper or Cu) and (tin or Sn)		
		and (groove or grooved) ) and stress) and (delaminat\$4		
		or fracture)) not (((pad and (copper or Cu) and (tin or		
		Sn) and (groove or grooved) ) and stress) and (delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) and nascent) not		
		6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
38	260	(pad and (copper or Cu) and (tin or Sn) and (textured or	USPAT;	2004/08/20 17:13
		texture) ) and stress	US-PGPUB;	
			EPO; DERWENT;	
			IBM TDB	
39	94	((pad and (copper or Cu) and (tin or Sn) and (textured	USPAT;	2004/08/20 17:13
		or texture) ) and stress) and (delaminat\$4 or fracture)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	

			T 10D AT	0004/00/00 17 : :
40	16	(((pad and (copper or Cu) and (tin or Sn) and (textured or texture)) and stress) and (delaminat\$4 or fracture))	USPAT; US-PGPUB;	2004/08/20 17:14
		not ((pad and (copper or Cu) and (tin or Sn) and	EPO;	
		(textured or texture) ) and (crack or cracks)) not	DERWENT;	
		(((interconnection and (copper or Cu) and (tin or Sn)	IBM_TDB	
			IDM_IDD	
		and (texture or textured) ) and stress) and (delaminat\$4		
		or fracture)) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not (((pad and (copper or Cu)		
		and (tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
	]	and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not		
	]	6365958.URPN. not 6365958.pn. not (("5801446"		
	}	"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
41	164	(interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 17:14
		(texture or textured) ) and (solder or ball)	US-PGPUB;	
		,, ,	EPO;	
			DERWENT;	
			IBM_TDB	
42	118	((interconnection and (copper or Cu) and (tin or Sn) and	USPAT;	2004/08/20 17:37
		(texture or textured) ) and (solder or ball)) not (((pad	US-PGPUB;	
		and (copper or Cu) and (tin or Sn) and (textured or	EPO;	
		texture) ) and stress) and (delaminat\$4 or fracture)) not	DERWENT;	
		((pad and (copper or Cu) and (tin or Sn) and (textured	IBM_TDB	
		or texture) ) and (crack or cracks)) not (((interconnection	12102	
		and (copper or Cu) and (tin or Sn) and (texture or		
		textured) ) and stress) and (delaminat\$4 or fracture)) not	İ	
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(texture or textured) ) and (crack or cracks)) not		
		(((interconnection and (copper or Cu) and (tin or Sn)	<u> </u>	
		and (groove or grooved) ) and stress) and (delaminat\$4		
		or fracture)) not (((pad and (copper or Cu) and (tin or		
		Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved)		
		and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
	1	"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not		
	1	6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
43	9866	(BGA or solder) and (crack or cracks)	USPAT;	2004/08/20 17:31
			US-PGPUB;	
	1		EPO;	
			DERWENT;	
	1		IBM TDB	

45	1063	((BGA or solder) and (crack or cracks)) and (grooves or	USPAT;	2004/08/20 17:29
		grooved)	US-PGPUB;	
		0 ,	EPO;	
			DERWENT;	
			IBM_TDB	
46	1	((BGA or solder) and (crack or cracks)) and	USPĀT;	2004/08/20 17:31
	1	((interconnection or pad) near (grooves or grooved))	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
47	1586	(BGA or solder) and (texture or textured)	USPAT;	2004/08/20 17:31
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
48	6	((BGA or solder) and (texture or textured)) and	USPAT;	2004/08/20 17:36
		((interconnection or pad) near (texture or textured))	US-PGPUB;	
		-	EPO;	
			DERWENT;	
			IBM_TDB	ŀ
49	0	6670222.URPN.	USPAT	2004/08/20 17:33
50	12	("4837130"   "5022043"   "5168401"   "5268978"	USPAT	2004/08/20 17:33
		"5485481"   "5580466"   "5609778"   "5696666"		
		"5708294"   "5715263"   "5804882"   "6397465").PN.		
51	0	((BGA or solder) and (texture or textured)) and	USPAT;	2004/08/20 17:37
		((interconnection or pad) near (castellations or	US-PGPUB;	
		corrugations))	EPO;	
			DERWENT;	
			IBM_TDB	
52	30	((interconnection or pad) near (castellations or	USPAT;	2004/08/20 17:40
		corrugations))	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM TDB	

53	30	(((interconnection or pad) near (castellations or	USPAT;	2004/08/20 17:40
		corrugations))) not (("4837130"   "5022043"	US-PGPUB;	
		"5168401"   "5268978"   "5485481"   "5580466"	EPO;	
		"5609778"   "5696666"   "5708294"   "5715263"	DERWENT;	
		"5804882"   "6397465").PN.) not (((BGA or solder) and	IBM_TDB	
		(texture or textured)) and ((interconnection or pad) near		
		(texture or textured))) not (((BGA or solder) and (crack		
		or cracks)) and ((interconnection or pad) near (grooves		
		or grooved))) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (solder or	:	
		ball)) not (((pad and (copper or Cu) and (tin or Sn) and		
		(textured or texture) ) and stress) and (delaminat\$4 or		
		fracture)) not ((pad and (copper or Cu) and (tin or Sn)		
		and (textured or texture) ) and (crack or cracks)) not		
		(((interconnection and (copper or Cu) and (tin or Sn)		
		and (texture or textured) ) and stress) and (delaminat\$4		
		or fracture)) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not (((pad and (copper or Cu)		
		and (tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not		
		6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
54	7	((BDA or solder) near (castellations or corrugations))	USPAT;	2004/08/20 17:40
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM TDB	

		///DDA 11 ) / . 11 1	LICDAM	0004/00/00 10 71
55	2	(((BDA or solder) near (castellations or corrugations)))	USPAT;	2004/08/20 18:51
		not (((interconnection or pad) near (castellations or	US-PGPUB;	
		corrugations))) not (("4837130"   "5022043"	EPO;	
		"5168401"   "5268978"   "5485481"   "5580466"	DERWENT;	
		"5609778"   "5696666"   "5708294"   "5715263"	IBM_TDB	
	1	"5804882"   "6397465").PN.) not (((BGA or solder) and		
		(texture or textured)) and ((interconnection or pad) near		
		(texture or textured))) not (((BGA or solder) and (crack		
	1	or cracks)) and ((interconnection or pad) near (grooves	1	
		or grooved))) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (solder or		
		ball)) not (((pad and (copper or Cu) and (tin or Sn) and		
	}	(textured or texture) ) and stress) and (delaminat\$4 or	1	
		fracture)) not ((pad and (copper or Cu) and (tin or Sn)		
	[	and (textured or texture)) and (crack or cracks)) not		
	.	(((interconnection and (copper or Cu) and (tin or Sn)		
		and (texture or textured) ) and stress) and (delaminat\$4		
		or fracture)) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured)) and (crack or		
	1	cracks)) not (((interconnection and (copper or Cu) and	-	
		(tin or Sn) and (groove or grooved)) and stress) and		
	1	(delaminat\$4 or fracture)) not (((pad and (copper or Cu)		
		and (tin or Sn) and (groove or grooved)) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not 5288007.URPN. not		
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		,
		(copper or Cu) and (tin or Sn) and (groove or grooved)		
		and (crack or cracks)) not (pad and (copper or Cu) and		
	į	(tin or Sn) and (groove or grooved) and nascent) not		
		6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
		(castellations and corrugations and interconnection)		
56	2079	438/108	USPAT;	2004/08/20 20:11
	20,7		US-PGPUB;	200 4 00/20 20.11
			EPO;	
			DERWENT;	
			IBM_TDB	
57	151	438/108 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:11
- 1		texture or textured or contoured)	US-PGPUB;	200400,2020.11
			EPO;	
	]		DERWENT;	
			IBM TDB	
L	1		IBM_TDB	

58	142	(420/100 and /anstallations or commentions or groups or	USPAT;	2004/08/20 20:11
36	143	(438/108 and (castellations or corrugations or grooves or texture or textured or contoured)) not (((BDA or solder)	US-PGPUB;	2004/08/20 20:11
		near (castellations or corrugations))) not	EPO;	
		(((interconnection or pad) near (castellations or	DERWENT;	
		(((Interconnection of pad) hear (casternations of corrugations))) not (("4837130"   "5022043"	IBM TDB	
		"5168401"   "5268978"   "5485481"   "5580466"	18111_188	
		"5609778"   "5696666"   "5708294"   "5715263"		
		"5804882"   "6397465").PN.) not (((BGA or solder) and		
		(texture or textured)) and ((interconnection or pad) near		
	:	(texture or textured))) not (((BGA or solder) and (crack		
		or cracks)) and ((interconnection or pad) near (grooves		
		or grooved))) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (solder or		
		ball)) not (((pad and (copper or Cu) and (tin or Sn) and		
		(textured or texture) ) and stress) and (delaminat\$4 or		
		fracture)) not ((pad and (copper or Cu) and (tin or Sn)		
		and (textured or texture) ) and (crack or cracks)) not		
		(((interconnection and (copper or Cu) and (tin or Sn)		
		and (texture or textured) ) and stress) and (delaminat\$4		
		or fracture)) not ((interconnection and (copper or Cu)		
		and (tin or Sn) and (texture or textured) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not (((pad and (copper or Cu)		
		and (tin or Sn) and (groove or grooved) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not 5288007.URPN. not	ļ	
		(("5946590"   "6030512").PN.) not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not ((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and (crack or cracks)) not (pad and (copper or Cu) and		
		(tin or Sn) and (groove or grooved) and nascent) not		
		6365958.URPN. not 6365958.pn. not (("5801446"		
		"6213347"   "6228680"   "6245583").PN.) not		
50		(castellations and corrugations and interconnection)		
59	0	20030064546.URPN.	USPAT	2004/08/20 18:54
60	0	6580174.URPN.	USPAT	2004/08/20 18:58
61	3	("5842275"   "5875102"   "6282782").PN.	USPAT	2004/08/20 18:58
62 63	18	5875102.URPN. 6426880.URPN.	USPAT	2004/08/20 18:59
64	1		USPAT	2004/08/20 19:05
0-4	18	("4442966"   "4818823"   "4836435"   "5241134"     "5344343"   "5446244"   "5519251"   "5545589"	USPAT	2004/08/20 19:05
,		"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
		"6137063"   "6324754").PN.		
65	I	6426241.URPN.	USPAT	2004/08/20 19:09
66	10	("4700473"   "4746621"   "5638598"   "6006764"	USPAT	2004/08/20 19:09
""		"6035527"   "6046910"   "6125531"   "6134118"		200 400/20 17,10
		"6143646"   "6211487").PN.		
67	27	6088236.URPN.	USPAT	2004/08/20 19:14
68	27	6088236.URPN.	USPAT	2004/08/20 19:15
69	o	6538335.URPN.	USPAT	2004/08/20 19:16
70	7	("4937653"   "5185073"   "5929521"   "5962921"	USPAT	2004/08/20 19:16
		"5977642"   "6088236"   "6150255").PN.		
71	26	5929521.URPN.	USPAT	2004/08/20 19:20
72	0	6583517.URPN.	USPAT	2004/08/20 19:21

73	13	("5736790"   "5874780"   "5929521"   "5977632"	USPAT	2004/08/20 19:21
		"6002172"   "6137184"   "6143639"   "6162997"		
		"6163957"   "6320254"   "6396156"   "6399896"		
	İ	"6433426").PN.		
74	146	4937653.URPN.	USPAT	2004/08/20 19:26
75	1241	438/597	USPAT;	2004/08/20 20:15
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
76	101	438/597 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:15
1		texture or textured or contoured)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	

77	7	(400/507 1 ( ) 11 :	LICDATE	1 0004/00/00 00 : 5
77	98	(438/597 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:15
		texture or textured or contoured)) not 4937653.URPN.	US-PGPUB;	
		not (("5736790"   "5874780"   "5929521"   "5977632"	EPO;	
		"6002172"   "6137184"   "6143639"   "6162997"	DERWENT;	
		"6163957"   "6320254"   "6396156"   "6399896"	IBM_TDB	
		"6433426").PN.) not 5929521.URPN. not (("4937653"		
		"5185073"   "5929521"   "5962921"   "5977642"		
		"6088236"   "6150255").PN.) not 6088236.URPN. not		
		(("4700473"   "4746621"   "5638598"   "6006764"		
		"6035527"   "6046910"   "6125531"   "6134118"		
		"6143646"   "6211487").PN.) not 6426241.URPN. not		
		(("4442966"   "4818823"   "4836435"   "5241134"		
		"5344343"   "5446244"   "5519251"   "5545589"		
		"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
	1	"6137063"   "6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
	1	corrugations))) not (((interconnection or pad) near	ļ	
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
		"5580466"   "5609778"   "5696666"   "5708294"	į	
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and		
		(solder or ball)) not (((pad and (copper or Cu) and (tin		
		or Sn) and (textured or texture) ) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured) )		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and stress) and (delaminat\$4 or fracture)) not		
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not	1	
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not ((pad and (copper or Cu) and (tin or Sn) and (groove		
		or grooved) ) and (crack or cracks)) not (pad and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) and		
		nascent) not 6365958.URPN. not 6365958.pn. not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not (castellations and corrugations and interconnection)		
78	1857	438/612	USPAT;	2004/08/20 20:44
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	

70	104	420/(10 1/ 11/11/11/11/11/11/11/11/11/11/11/11/	LICDAM	0004/00/00 00 11
79	136	438/612 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:44
		texture or textured or contoured)	US-PGPUB; EPO;	
•			DERWENT;	
			IBM TDB	
80	106	(438/612 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:44
00	100	texture or textured or contoured)) not (438/597 and	US-PGPUB;	2004/00/20 20.44
		(castellations or corrugations or grooves or texture or	EPO;	
		textured or contoured)) not 4937653.URPN. not	DERWENT;	
		(("5736790"   "5874780"   "5929521"   "5977632"	IBM TDB	
		"6002172"   "6137184"   "6143639"   "6162997"	15155	
		"6163957"   "6320254"   "6396156"   "6399896"		
		"6433426").PN.) not 5929521.URPN. not (("4937653"		
		"5185073"   "5929521"   "5962921"   "5977642"		
		"6088236"   "6150255").PN.) not 6088236.URPN. not		
		(("4700473"   "4746621"   "5638598"   "6006764"		
		"6035527"   "6046910"   "6125531"   "6134118"		
		"6143646"   "6211487").PN.) not 6426241.URPN. not		
		(("4442966"   "4818823"   "4836435"   "5241134"		
		"5344343"   "5446244"   "5519251"   "5545589"		
	·	"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
		"6137063"   "6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"   "5580466"   "5600779"   "5606666"   "5708304"		
		"5580466"   "5609778"   "5696666"   "5708294"   "5715262"   "5904882"   "6207465") DN ) pot ((/PCA or		
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and		
		(solder or ball)) not (((pad and (copper or Cu) and (tin		
		or Sn) and (textured or texture) ) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured) )		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and stress) and (delaminat\$4 or fracture)) not		
•		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not		
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not ((pad and (copper or Cu) and (tin or Sn) and (groove		
		or grooved) ) and (crack or cracks)) not (pad and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) and		
		nascent) not 6365958.URPN. not 6365958.pn. not (("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not (castellations and corrugations and interconnection)		
<u> </u>		not (castenations and corrugations and interconnection)	<u> </u>	<u> </u>

81	3	6287950.URPN.	USPAT	2004/08/20 20:18
82	5	("4628590"   "5731243"   "5807787"   "6060378"   "6200889").PN.	USPAT	2004/08/20 20:18
83	1733	438/613	USPAT; US-PGPUB; EPO; DERWENT; IBM TDB	2004/08/20 20:45
84	135	438/613 and (castellations or corrugations or grooves or texture or textured or contoured)	USPAT; US-PGPUB; EPO; DERWENT; IBM_TDB	2004/08/20 20:45

85	56	(438/613 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:45
		texture or textured or contoured)) not (("4628590"	US-PGPUB;	
		"5731243"   "5807787"   "6060378"   "6200889").PN.)	EPO;	
		not 6287950.URPN. not (438/612 and (castellations or	DERWENT;	
		corrugations or grooves or texture or textured or	IBM TDB	
		contoured)) not (438/597 and (castellations or		
1		corrugations or grooves or texture or textured or		
		contoured)) not 4937653.URPN. not (("5736790"		
1		"5874780"   "5929521"   "5977632"   "6002172"   <sup>'</sup>		
		"6137184"   "6143639"   "6162997"   "6163957"		
		"6320254"   "6396156"   "6399896"   "6433426").PN.)		
		not 5929521.URPN. not (("4937653"   "5185073"		
		"5929521"   "5962921"   ``S977642"   "6088236"		
		"6150255").PN.) not 6088236.URPN. not (("4700473"		
		"4746621"   "5638598"   "6006764"   "603 <del>5</del> 527"		
		"6046910"   "6125531"   "6134118"   "6143646"		
		"6211487").PN.) not 6426241.URPN. not (("4442966"		
		"4818823"   "4836435"   "5241134"   "5344343"		
		"5446244"   "5519251"   "5545589"   "5628919"		
		"5823801"   "5828128"   "5879206"   "5889657"		
		"6005290"   "6040626"   "6083666"   "6137063"		
		"6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or	<u> </u>	
1		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
		"5580466"   "5609778"   "5696666"   "5708294"		
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and		
		(solder or ball)) not (((pad and (copper or Cu) and (tin		1
		or Sn) and (textured or texture) ) and stress) and		
-		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured))		
ļ		and (crack or cracks)) not (((interconnection and (copper		
1		or Cu) and (tin or Sn) and (groove or grooved) ) and		
İ		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and stress) and (delaminat\$4 or fracture)) not		
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not		
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not ((pad and (copper or Cu) and (tin or Sn) and (groove		
		or grooved) ) and (crack or cracks)) not (pad and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) and		
		nascent) not 6365958.URPN. not 6365958.pn. not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		not (castellations and corrugations and interconnection)	_	

86	404	438/615	USPAT;	2004/08/20 20:46
-			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
87	29	438/615 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:46
		texture or textured or contoured)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	

		(400/615 1/	LICDAT	0004/00/00 00 46
88	5	(438/615 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:46
		texture or textured or contoured)) not (438/613 and	US-PGPUB;	
		(castellations or corrugations or grooves or texture or	EPO;	
		textured or contoured)) not (("4628590"   "5731243"	DERWENT;	
		"5807787"   "6060378"   "6200889").PN.) not	IBM_TDB	
		6287950.URPN. not (438/612 and (castellations or		
		corrugations or grooves or texture or textured or		
İ		contoured)) not (438/597 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not 4937653.URPN. not (("5736790"		
		"5874780"   "5929521"   "5977632"   "6002172"		
		"6137184"   "6143639"   "6162997"   "6163957"		
		"6320254"   "6396156"   "6399896"   "6433426").PN.)		
		not 5929521.URPN. not (("4937653"   "5185073"		
		"5929521"   "5962921"   "5977642"   "6088236"		
		"6150255").PN.) not 6088236.URPN. not (("4700473"		
		"4746621"   "5638598"   "6006764"   "6035527"		
		"6046910"   "6125531"   "6134118"   "6143646"		
		"6211487").PN.) not 6426241.URPN. not (("4442966"		
		"4818823"   "4836435"   "5241134"   "5344343"		
		"5446244"   "5519251"   "5545589"   "5628919"		
		"5823801"   "5828128"   "5879206"   "5889657"		
		"6005290"   "6040626"   "6083666"   "6137063"		
		"6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
		"5580466"   "5609778"   "5696666"   "5708294"		•
i .		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)	- 0	
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and		
		(solder or ball)) not (((pad and (copper or Cu) and (tin		
		or Sn) and (textured or texture) ) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured)		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and stress) and (delaminat\$4 or fracture)) not	İ	
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not		
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
]		not ((pad and (copper or Cu) and (tin or Sn) and (groove		
]		or grooved) ) and (crack or cracks)) not (pad and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) and		
		nascent) not 6365958.URPN. not 6365958.pn. not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
C 1 I I I	0/00/04	2. 1956 A 186   02155 17   0225000   0215505 ). 1(1.)		
Search Histo	rv 8/20/04 (	3:35:UZ PM Pare 16 Corregations and interconnection)		

89	988	438/666	USPAT;	2004/08/20 20:47
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
90	87	438/666 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:47
		texture or textured or contoured)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM TDB	

91 63	(438/666 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:43
	texture or textured or contoured)) not (438/615 and	US-PGPUB;	
	(castellations or corrugations or grooves or texture or	EPO;	
	textured or contoured)) not (438/613 and (castellations	DERWENT;	
	or corrugations or grooves or texture or textured or	IBM_TDB	
	contoured)) not (("4628590"   "5731243"   "5807787"	_	
	"6060378"   "6200889").PN.) not 6287950.URPN. not		
	(438/612 and (castellations or corrugations or grooves or		
	texture or textured or contoured)) not (438/597 and		
	(castellations or corrugations or grooves or texture or		
	textured or contoured)) not 4937653.URPN. not		
	(("5736790"   "5874780"   "5929521"   "5977632"		
	"6002172"   "6137184"   "6143639"   "6162997"		
	"6163957"   "6320254"   "6396156"   "6399896"		
	"6433426").PN.) not 5929521.URPN. not (("4937653"	Į	
	"5185073"   "5929521"   "5962921"   "5977642"		
	"6088236"   "6150255").PN.) not 6088236.URPN. not		
	(("4700473"   "4746621"   "5638598"   "6006764"		
	"6035527"   "6046910"   "6125531"   "6134118"		
	"6143646"   "6211487").PN.) not 6426241.URPN. not		
	(("4442966"   "4818823"   "4836435"   "5241134"     "5344343"   "5446244"   "5519251"   "5545589"		
	"5628919"   "5823801"   "5828128"   "5879206"		
	"5889657"   "6005290"   "6040626"   "6083666"		
	"6137063"   "6324754").PN.) not 6426880.URPN. not		
	5875102.URPN. not (("5842275"   "5875102"		
	"6282782").PN.) not (438/108 and (castellations or		
	corrugations or grooves or texture or textured or		
	contoured)) not (((BDA or solder) near (castellations or		
	corrugations))) not (((interconnection or pad) near		
	(castellations or corrugations))) not (("4837130"		
	"5022043"   "5168401"   "5268978"   "5485481"		
	"5580466"   "5609778"   "5696666"   "5708294"		
	"5715263"   "5804882"   "6397465").PN.) not (((BGA or		,
	solder) and (texture or textured)) and ((interconnection		
	or pad) near (texture or textured))) not (((BGA or solder)		
	and (crack or cracks)) and ((interconnection or pad) near		
	(grooves or grooved))) not ((interconnection and (copper		
	or Cu) and (tin or Sn) and (texture or textured) ) and		
	(solder or ball)) not (((pad and (copper or Cu) and (tin		
	or Sn) and (textured or texture)) and stress) and		
	(delaminat\$4 or fracture)) not ((pad and (copper or Cu) and (tin or Sn) and (textured or texture)) and (crack or		
	cracks)) not (((interconnection and (copper or Cu) and		
	(tin or Sn) and (texture or textured) ) and stress) and		
	(delaminat\$4 or fracture)) not ((interconnection and		
	(copper or Cu) and (tin or Sn) and (texture or textured))		
	and (crack or cracks)) not (((interconnection and (copper		
	or Cu) and (tin or Sn) and (groove or grooved) ) and		
	stress) and (delaminat\$4 or fracture)) not (((pad and		
	(copper or Cu) and (tin or Sn) and (groove or grooved))		
	and stress) and (delaminat\$4 or fracture)) not		
	((interconnection and (copper or Cu) and (tin or Sn) and		
	(groove or grooved) ) and (crack or cracks)) not		
	5288007.URPN. not (("5946590"   "6030512").PN.) not		
	(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
	not ((pad and (copper or Cu) and (tin or Sn) and (groove		
	or grooved) ) and (crack or cracks)) not (pad and (copper		
	or Cu) and (tin or Sn) and (groove or grooved) and		
	nascent) not 6365958.URPN. not 6365958.pn. not		
earch History 8/20/04	8:55-02 PM   #6218347"   "6228680"   "6245583").PN.)		
:\APPS\EAST\Workspac	8:55:02 PM Page 18 i not (castellations and corrugations and interconnection) es\163:wsp	l	L

92	1947	438/687	USPAT;	2004/08/20 20:47
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
93	242	438/687 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:50
		texture or textured or contoured)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	

94 188	(438/687 and (castellations or corrugations or grooves or	USPAT;	2004/08/20 20:50
100	texture or textured or contoured)) not (438/666 and	US-PGPUB;	200 400,20 20.30
	(castellations or corrugations or grooves or texture or	EPO;	
	textured or contoured)) not (438/615 and (castellations	DERWENT;	
	or corrugations or grooves or texture or textured or	IBM_TDB	
	contoured)) not (438/613 and (castellations or		
	corrugations or grooves or texture or textured or		
	contoured)) not (("4628590"   "5731243"   "5807787"		
	"6060378"   "6200889").PN.) not 6287950.URPN. not		
	(438/612 and (castellations or corrugations or grooves or		
	texture or textured or contoured)) not (438/597 and		
	(castellations or corrugations or grooves or texture or		
	textured or contoured)) not 4937653.URPN. not (("5736790"   "5874780"   "5929521"   "5977632"		
	"6002172"   "6137184"   "6143639"   "6162997"		
	"6163957"   "6320254"   "6396156"   "6399896"		
	"6433426").PN.) not 5929521.URPN. not (("4937653"		
	"5185073"   "5929521"   "5962921"   "5977642"		
	"6088236"   "6150255").PN.) not 6088236.URPN. not		
	(("4700473"   "4746621"   "5638598"   "6006764"		
	"6035527"   "6046910"   "6125531"   "6134118"		
	"6143646"   "6211487").PN.) not 6426241.URPN. not		
	(("4442966"   "4818823"   "4836435"   "5241134"		
	"5344343"   "5446244"   "5519251"   "5545589"		
	"5628919"   "5823801"   "5828128"   "5879206"		
	"5889657"   "6005290"   "6040626"   "6083666"		
	"6137063"   "6324754").PN.) not 6426880.URPN. not		
	5875102.URPN. not (("5842275"   "5875102"		
	"6282782").PN.) not (438/108 and (castellations or		
	corrugations or grooves or texture or textured or contoured)) not (((BDA or solder) near (castellations or		
	corrugations))) not (((interconnection or pad) near		
	(castellations or corrugations))) not (("4837130"		
	"5022043"   "5168401"   "5268978"   "5485481"		
	"5580466"   "5609778"   "5696666"   "5708294"		
	"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
	solder) and (texture or textured)) and ((interconnection		
	or pad) near (texture or textured))) not (((BGA or solder)		
	and (crack or cracks)) and ((interconnection or pad) near		
	(grooves or grooved))) not ((interconnection and (copper		
	or Cu) and (tin or Sn) and (texture or textured) ) and		
	(solder or ball)) not (((pad and (copper or Cu) and (tin or Sn) and (textured or texture) ) and stress) and		
	(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
	and (tin or Sn) and (textured or texture) ) and (crack or		
	cracks)) not (((interconnection and (copper or Cu) and		
	(tin or Sn) and (texture or textured) ) and stress) and		
	(delaminat\$4 or fracture)) not ((interconnection and		
	(copper or Cu) and (tin or Sn) and (texture or textured) )		
	and (crack or cracks)) not (((interconnection and (copper		
	or Cu) and (tin or Sn) and (groove or grooved) ) and		
	stress) and (delaminat\$4 or fracture)) not (((pad and		
	(copper or Cu) and (tin or Sn) and (groove or grooved))		
	and stress) and (delaminat\$4 or fracture)) not		
	((interconnection and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not		
	5288007.URPN. not (("5946590"   "6030512").PN.) not		
	(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
	not ((pad and (copper or Cu) and (tin or Sn) and (groove		
	or grooved) ) and (crack or cracks)) not (pad and (copper		
earch History 8/20/04	or Culting or Sn) and (proove or prooved) and		
APPS\EAST\Warkenso	135:02/PM		
* ~ r own to I /vv oirspace	~`(("580'1446"   "6213347"   "6228680"   "6245583").PN.)		
I I			

95	516	bump and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 20:51
		grooved)	US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM TDB	

06 207	(1) (2) (-1/4) (2) (-1/4)	LICDATE	0004/00/00 00 50
96 327	(bump and (copper or Cu) and (tin or Sn) and (groove or	USPAT;	2004/08/20 20:52
	grooved) ) not (438/687 and (castellations or	US-PGPUB;	
	corrugations or grooves or texture or textured or	EPO;	
	contoured)) not (438/666 and (castellations or	DERWENT;	
	corrugations or grooves or texture or textured or	IBM_TDB	
	contoured)) not (438/615 and (castellations or		
	corrugations or grooves or texture or textured or		
İ	contoured)) not (438/613 and (castellations or		
	corrugations or grooves or texture or textured or		
	contoured)) not (("4628590"   "5731243"   "5807787"		
	"6060378"   "6200889").PN.) not 6287950.URPN. not		
	(438/612 and (castellations or corrugations or grooves or		
	texture or textured or contoured)) not (438/597 and		
	(castellations or corrugations or grooves or texture or		
	textured or contoured)) not 4937653.URPN. not		
	(("5736790"   "5874780"   "5929521"   "5977632"		
	"6002172"   "6137184"   "6143639"   "6162997"		
	"6163957"   "6320254"   "6396156"   "6399896"		
İ	"6433426").PN.) not 5929521.URPN. not (("4937653"		
	"5185073"   "5929521"   "5962921"   "5977642"		
	"6088236"   "6150255").PN.) not 6088236.URPN. not		
	(("4700473"   "4746621"   "5638598"   "6006764"		
	"6035527"   "6046910"   "6125531"   "6134118"		
	"6143646"   "6211487").PN.) not 6426241.URPN. not		
	(("4442966"   "4818823"   "4836435"   "5241134"		
	"5344343"   "5446244"   "5519251"   "5545589"		
	"5628919"   "5823801"   "5828128"   "5879206"		
	"5889657"   "6005290"   "6040626"   "6083666"		
	"6137063"   "6324754").PN.) not 6426880.URPN. not		
	5875102.URPN. not (("5842275"   "5875102"		
	"6282782").PN.) not (438/108 and (castellations or		
	corrugations or grooves or texture or textured or		
	•		
	contoured)) not (((BDA or solder) near (castellations or corrugations))) not (((interconnection or pad) near		
	(castellations or corrugations))) not (("4837130"		
	"5022043"   "5168401"   "5268978"   "5485481"		
	"5580466"   "5609778"   "5696666"   "5708294"		
[	"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
	solder) and (texture or textured)) and ((interconnection		
	or pad) near (texture or textured))) not (((BGA or solder)		
	and (crack or cracks)) and ((interconnection or pad) near		
,	(grooves or grooved))) not ((interconnection and (copper		
	or Cu) and (tin or Sn) and (texture or textured) ) and		
	(solder or ball)) not (((pad and (copper or Cu) and (tin		
	or Sn) and (textured or texture) ) and stress) and		
	(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
	and (tin or Sn) and (textured or texture) ) and (crack or	ĺ	
	cracks)) not (((interconnection and (copper or Cu) and		
	(tin or Sn) and (texture or textured) ) and stress) and		
	(delaminat\$4 or fracture)) not ((interconnection and		
	(copper or Cu) and (tin or Sn) and (texture or textured))		
	and (crack or cracks)) not (((interconnection and (copper		
	or Cu) and (tin or Sn) and (groove or grooved) ) and		
	stress) and (delaminat\$4 or fracture)) not (((pad and		
	(copper or Cu) and (tin or Sn) and (groove or grooved))		
	and stress) and (delaminat\$4 or fracture)) not		
	((interconnection and (copper or Cu) and (tin or Sn) and		
	(groove or grooved) ) and (crack or cracks)) not		
	5266007. ORFN. NOt (( 5946590"   "6030512"),PN.) NOT		
	5288007.URPN. not (("5946590"   "6030512").PN.) not (("5801446"   "6213347"   "6228680"   "6245583").PN.)	ļ	
Search History 9/20/04 9	(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
Search History 8/20/04 8	(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
Search History 8/20/04 8 C:\APPS\EAST\Workspace	(("5801446"   "6213347"   "6228680"   "6245583").PN.)		

07	177	(//	LICDAT	0004/00/00 00 51
97	177	((bump and (copper or Cu) and (tin or Sn) and (groove or grooved) ) not (438/687 and (castellations or	USPAT; US-PGPUB;	2004/08/20 20:51
		corrugations or grooves or texture or textured or	EPO;	
		contoured)) not (438/666 and (castellations or	DERWENT;	
		corrugations or grooves or texture or textured or	IBM TDB	
		contoured)) not (438/615 and (castellations or	10100	
		corrugations or grooves or texture or textured or		
		contoured)) not (438/613 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (("4628590"   "5731243"   "5807787"		
		"6060378"   "6200889").PN.) not 6287950.URPN. not		
		(438/612 and (castellations or corrugations or grooves or		
		texture or textured or contoured)) not (438/597 and		
		(castellations or corrugations or grooves or texture or		
		textured or contoured)) not 4937653.URPN. not		
.		(("5736790"   "5874780"   "5929521"   "5977632"		
		"6002172"   "6137184"   "6143639"   "6162997"		
		"6163957"   "6320254"   "6396156"   "6399896"		
		"6433426").PN.) not 5929521.URPN. not (("4937653"		
		"5185073"   "5929521"   "5962921"   "5977642"		
		"6088236"   "6150255").PN.) not 6088236.URPN. not		
		(("4700473"   "4746621"   "5638598"   "6006764"		
		"6035527"   "6046910"   "6125531"   "6134118"		
		"6143646"   "6211487").PN.) not 6426241.URPN. not		
		(("4442966"   "4818823"   "4836435"   "5241134"		
		"5344343"   "5446244"   "5519251"   "5545589"		
		"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
		"6137063"   "6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
İ		"5580466"   "5609778"   "5696666"   "5708294"		
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and (solder or hall)) not (((nad and (copper or Cu) and (tin		
		(solder or ball)) not (((pad and (copper or Cu) and (tin or Sn) and (textured or texture) ) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured)) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured)		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and stress) and (delaminat\$4 or fracture)) not		
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved)) and (crack or cracks)) not		
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
arah I Ita	0/20/04	s pota/spatiands (copper or Cu) and (tin or Sn) and (proove		
arch History	8/2U/U4 8	or grooved) ) and (crack or cracks)) not (pad and (copper sold) and (fin or Sp) and (groove or grooved) and		
VLL9/EV21/	vvorkspace	or Cu) and (tin or Sn) and (groove or grooved) and		
1		,, 6.55.55 8.55,55,		

8	17	((bump and (copper or Cu) and (tin or Sn) and (groove or grooved) ) not (438/687 and (castellations or	USPAT; US-PGPUB;	2004/08/20 20:5
		, , , ,	EPO;	
		corrugations or grooves or texture or textured or		
		contoured)) not (438/666 and (castellations or	DERWENT;	
		corrugations or grooves or texture or textured or	IBM_TDB	ļ
		contoured)) not (438/615 and (castellations or		
		corrugations or grooves or texture or textured or		İ
		contoured)) not (438/613 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (("4628590"   "5731243"   "5807787"		1
		"6060378"   "6200889").PN.) not 6287950.URPN. not		
		(438/612 and (castellations or corrugations or grooves or		1
		texture or textured or contoured)) not (438/597 and		
1		(castellations or corrugations or grooves or texture or		
		textured or contoured)) not 4937653.URPN. not		
İ		(("5736790"   "5874780"   "5929521"   "5977632"		
		"6002172"   "6137184"   "6143639"   "6162997"		
		"6163957"   "6320254"   "6396156"   "6399896"		
		"6433426").PN.) not 5929521.URPN. not (("4937653"		
		"5185073"   "5929521"   "5962921"   "5977642"		
		"6088236"   "6150255").PN.) not 6088236.URPN. not		
		(("4700473"   "4746621"   "5638598"   "6006764"		
Ì		"6035527"   "6046910"   "6125531"   "6134118"		
		"6143646"   "6211487").PN.) not 6426241.URPN. not		
		(("4442966"   "4818823"   "4836435"   "5241134"		
		"5344343"   "5446244"   "5519251"   "5545589"		
		"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
•		"6137063"   "6324754").PN.) not 6426880.URPN. not		
		· · · · · · · · · · · · · · · · · · ·		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
		"5580466"   "5609778"   "5696666"   "5708294"		
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		solder) and (texture or textured)) and ((interconnection		
		or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
		(grooves or grooved))) not ((interconnection and (copper		
		or Cu) and (tin or Sn) and (texture or textured) ) and		
		(solder or ball)) not (((pad and (copper or Cu) and (tin		
		or Sn) and (textured or texture) ) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		1
		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured) ) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured))		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved) )		
		and stress) and (delaminat\$4 or fracture)) not		
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not		
		5288007.URPN. not (("5946590"   "6030512").PN.) not		
		(("5801446"   "6213347"   "6228680"   "6245583").PN.)		
		(( 55511.5   5515511   52255000   5245505 ).FN.)		1
<del></del>	0.40	LUCIALISH AND COMPTON OF THE SHOP OF THE S		
rch History	8/20/04	and (groove and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) and		

99	4646	bump and (copper or Cu) and (tin or Sn)	USPAT;	2004/08/20 20:51
			US-PGPUB;	
			EPO;	
			DERWENT;	
			IBM_TDB	
100	703	(bump and (copper or Cu) and (tin or Sn) ) and	USPAT;	2004/08/20 20:52
		(castellations or corrugations or grooves or texture or	US-PGPUB;	
		textured or contoured)	EPO;	
			DERWENT;	
			IBM_TDB	
	431	((bump and (copper or Cu) and (tin or Sn) ) and	USPAT;	2004/08/20 20:52
		(castellations or corrugations or grooves or texture or	US-PGPUB;	
		textured or contoured)) and (cracks or fractures or stress)	EPO;	
			DERWENT;	
			IBM_TDB	

102	210	(((bump and (copper or Cu) and (tin or Sn) ) and	USPAT;	2004/08/20 20:52
1		(castellations or corrugations or grooves or texture or	US-PGPUB;	
		textured or contoured)) and (cracks or fractures or	EPO;	
		stress)) not (438/687 and (castellations or corrugations	DERWENT;	
		or grooves or texture or textured or contoured)) not	IBM_TDB	
		(438/666 and (castellations or corrugations or grooves or		
		texture or textured or contoured)) not (438/615 and		
		(castellations or corrugations or grooves or texture or	}	
		textured or contoured)) not (438/613 and (castellations	1	
		or corrugations or grooves or texture or textured or		•
		contoured)) not (("4628590"   "5731243"   "5807787"		
		"6060378"   "6200889").PN.) not 6287950.URPN. not		
		(438/612 and (castellations or corrugations or grooves or		
		texture or textured or contoured)) not (438/597 and		
		(castellations or corrugations or grooves or texture or		
		textured or contoured)) not 4937653.URPN. not	]	
		(("5736790"   "5874780"   "5929521"   "5977632"		
		"6002172"   "6137184"   "6143639"   "6162997"	1	
		"6163957"   "6320254"   "6396156"   "6399896"		
		"6433426").PN.) not 5929521.URPN. not (("4937653"		
		"5185073"   "5929521"   "5962921"   "5977642"		
		"6088236"   "6150255").PN.) not 6088236.URPN. not		
		(("4700473"   "4746621"   "5638598"   "6006764"		
		"6035527"   "6046910"   "6125531"   "6134118"		
		"6143646"   "6211487").PN.) not 6426241.URPN. not		
		(("4442966"   "4818823"   "4836435"   "5241134"		
		"5344343"   "5446244"   "5519251"   "5545589"		
		"5628919"   "5823801"   "5828128"   "5879206"		
		"5889657"   "6005290"   "6040626"   "6083666"		
		"6137063"   "6324754").PN.) not 6426880.URPN. not		
		5875102.URPN. not (("5842275"   "5875102"		
		"6282782").PN.) not (438/108 and (castellations or		
		corrugations or grooves or texture or textured or		
		contoured)) not (((BDA or solder) near (castellations or		
		corrugations))) not (((interconnection or pad) near		
		(castellations or corrugations))) not (("4837130"		
		"5022043"   "5168401"   "5268978"   "5485481"		
		"5580466"   "5609778"   "5696666"   "5708294"		
		"5715263"   "5804882"   "6397465").PN.) not (((BGA or		
		·		
		solder) and (texture or textured)) and ((interconnection or pad) near (texture or textured))) not (((BGA or solder)		
		and (crack or cracks)) and ((interconnection or pad) near		
İ				
1		(grooves or grooved))) not ((interconnection and (copper or Cu) and (tin or Sn) and (texture or textured) ) and		1
		· · · · · · · · · · · · · · · · · · ·		
ļ		(solder or ball)) not (((pad and (copper or Cu) and (tin		
		or Sn) and (textured or texture)) and stress) and		
		(delaminat\$4 or fracture)) not ((pad and (copper or Cu)		
		and (tin or Sn) and (textured or texture) ) and (crack or		
İ		cracks)) not (((interconnection and (copper or Cu) and		
		(tin or Sn) and (texture or textured)) and stress) and		
		(delaminat\$4 or fracture)) not ((interconnection and		
		(copper or Cu) and (tin or Sn) and (texture or textured))		
		and (crack or cracks)) not (((interconnection and (copper		
		or Cu) and (tin or Sn) and (groove or grooved) ) and		
		stress) and (delaminat\$4 or fracture)) not (((pad and		
		(copper or Cu) and (tin or Sn) and (groove or grooved))		
		and stress) and (delaminat\$4 or fracture)) not		İ
		((interconnection and (copper or Cu) and (tin or Sn) and		
		(groove or grooved) ) and (crack or cracks)) not	]	
		5288007.URPN. not (("5946590"   "6030512").PN.) not	1	
arch History	8/20/04	8:55:50   446"   - "6213347"   "6228680"   "6245583").PN.)	<del>                                     </del>	
APPS\EAST\	Workspace	not (pad and (copper or Cu) and (tin or Sn) and (groove or grooved) ) and (crack or cracks)) not (pad and (copper		
	,	or grooved) and (crack or cracks)) not (pad and (copper	I	I